

Fig. 1A

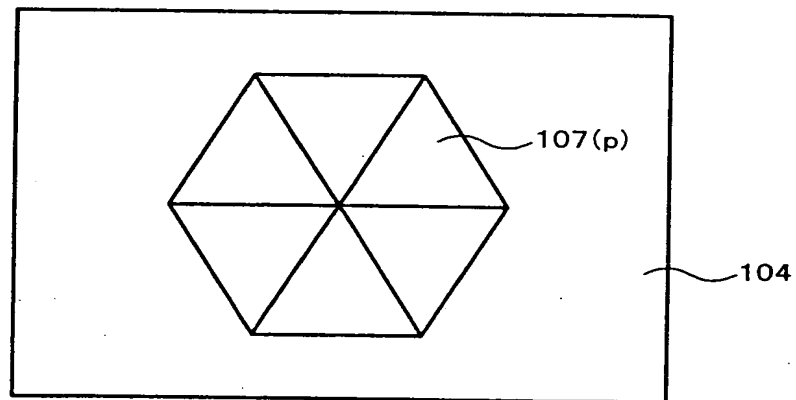


Fig. 1B

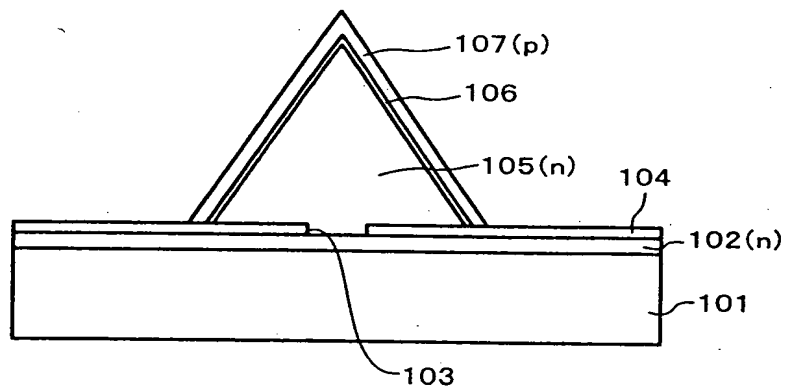


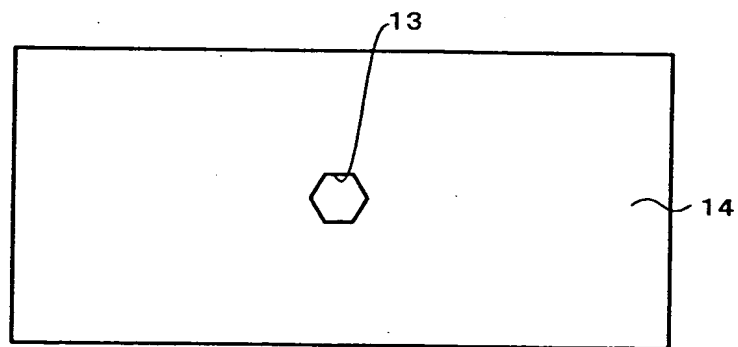
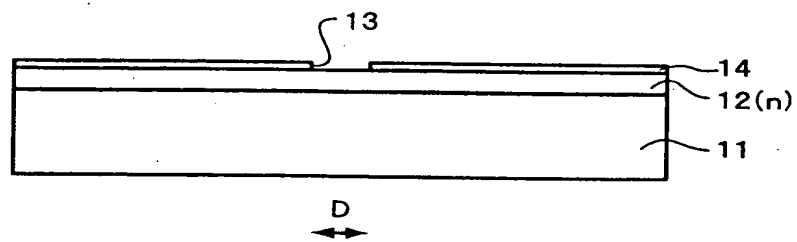
Fig. 2A**Fig. 2B**

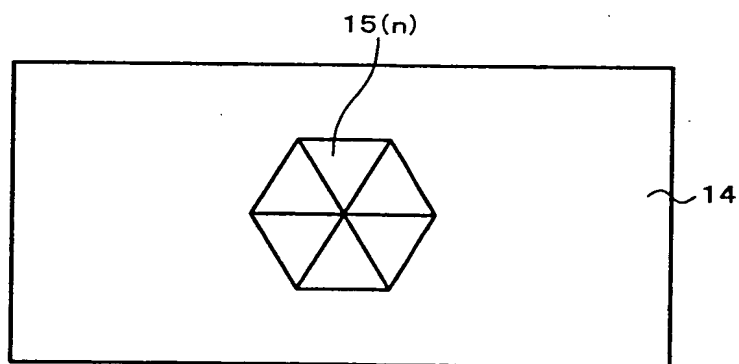
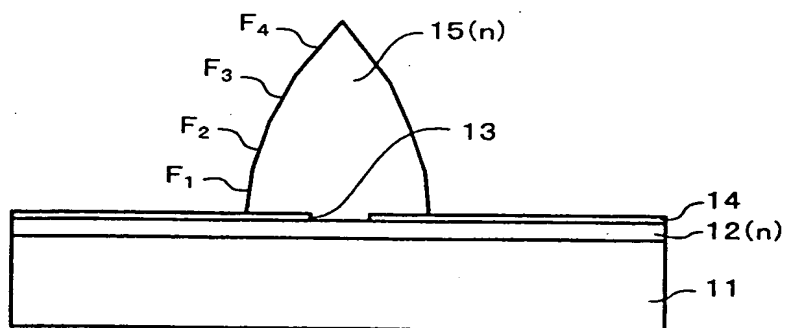
Fig. 3A**Fig. 3B**

Fig. 4A

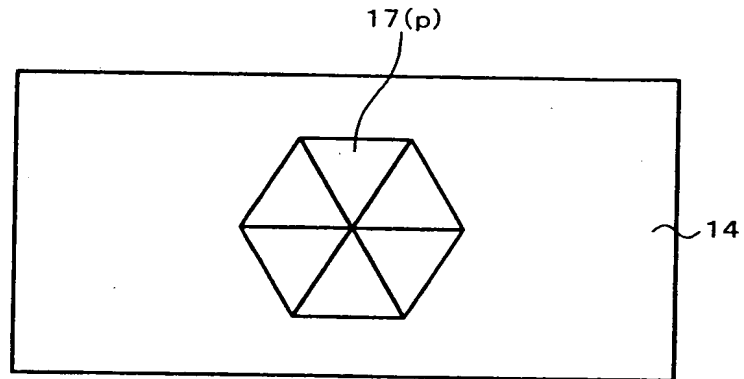


Fig. 4B

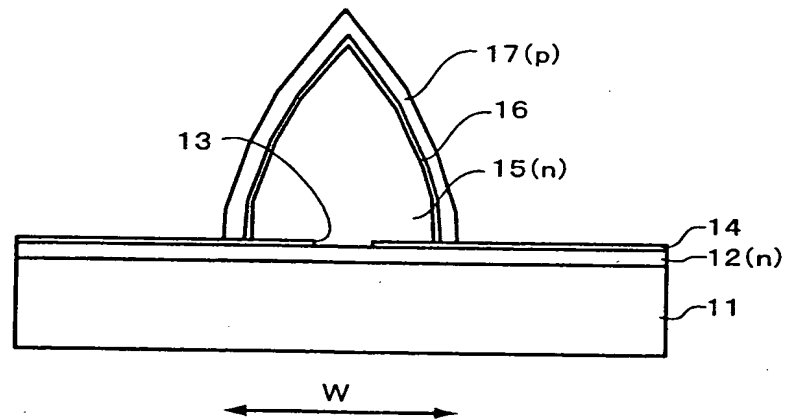


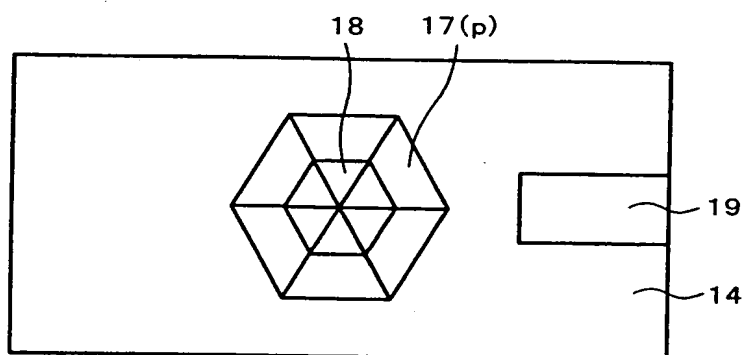
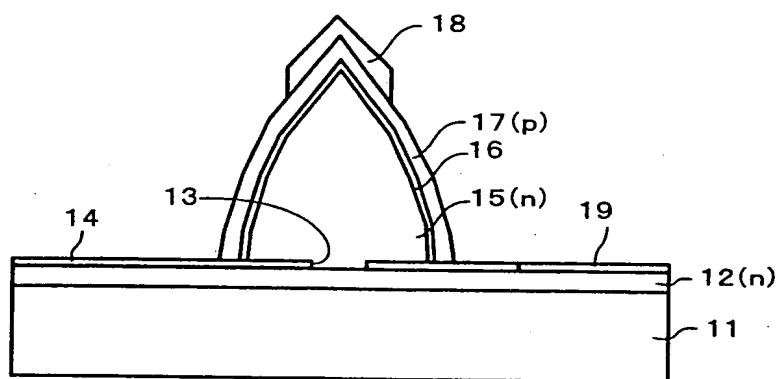
Fig. 5A**Fig. 5B**

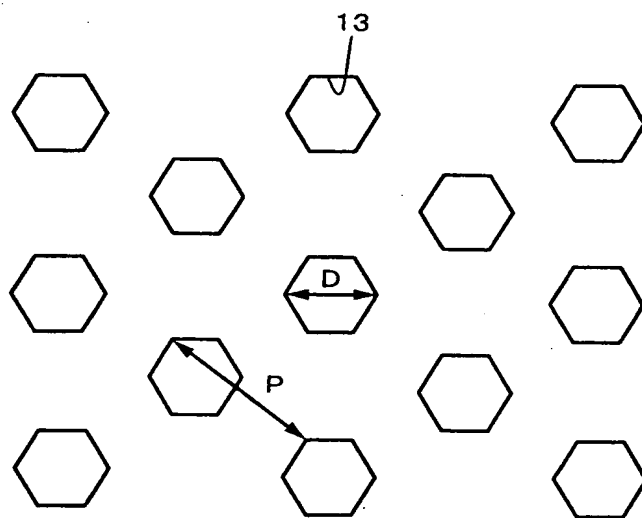
Fig. 6

Fig. 7

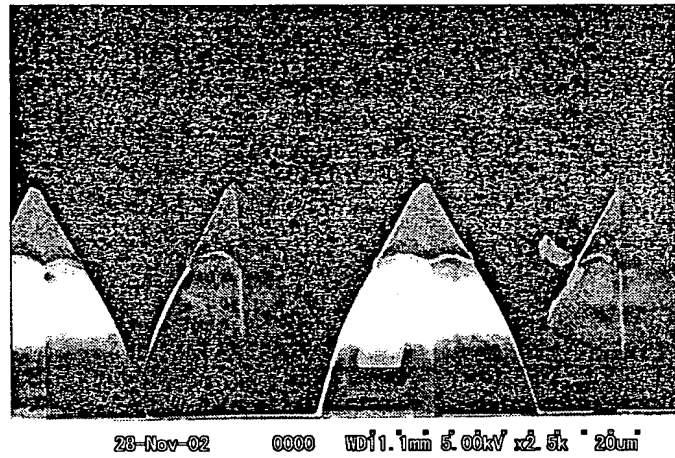


Fig. 8

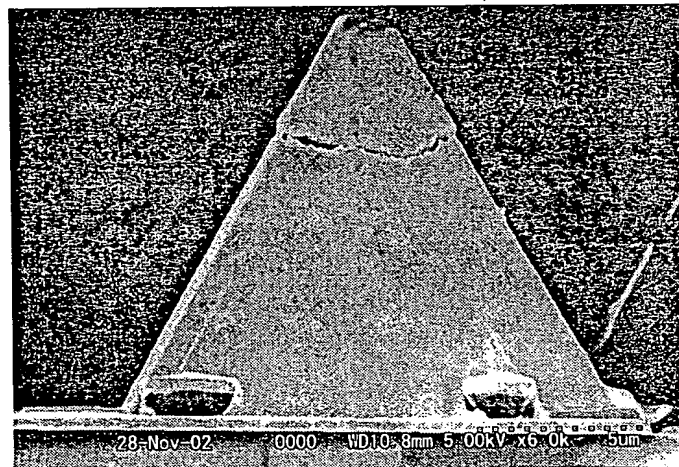


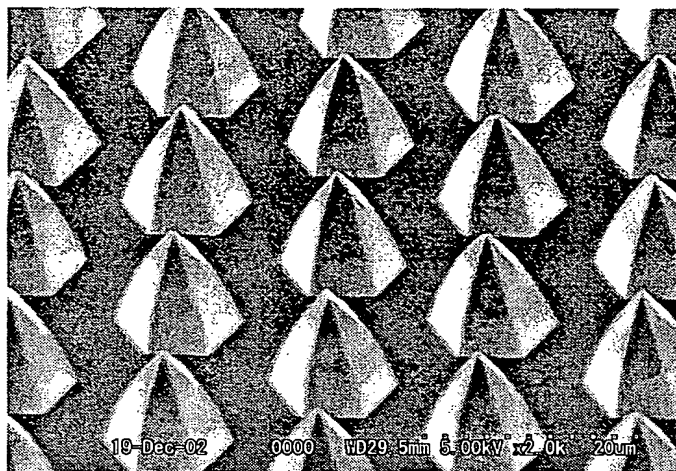
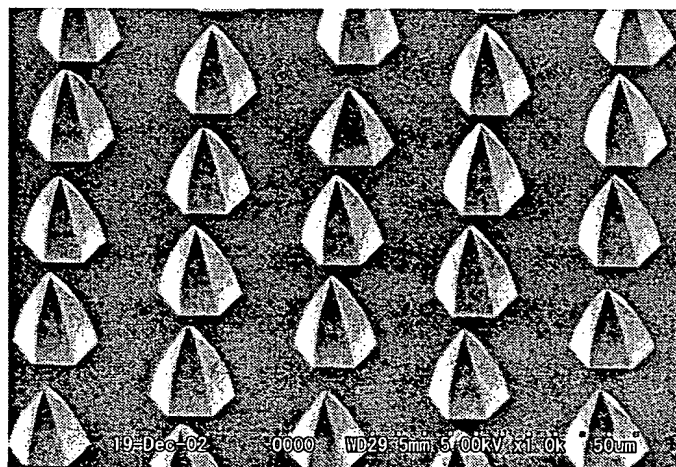
Fig. 9**Fig. 10**

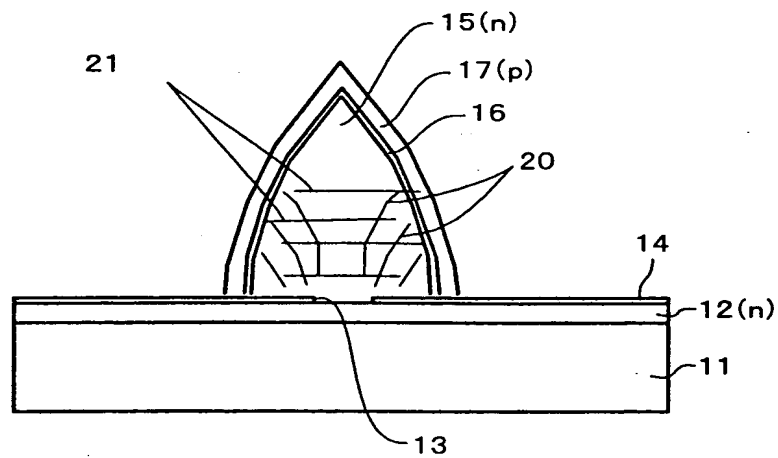
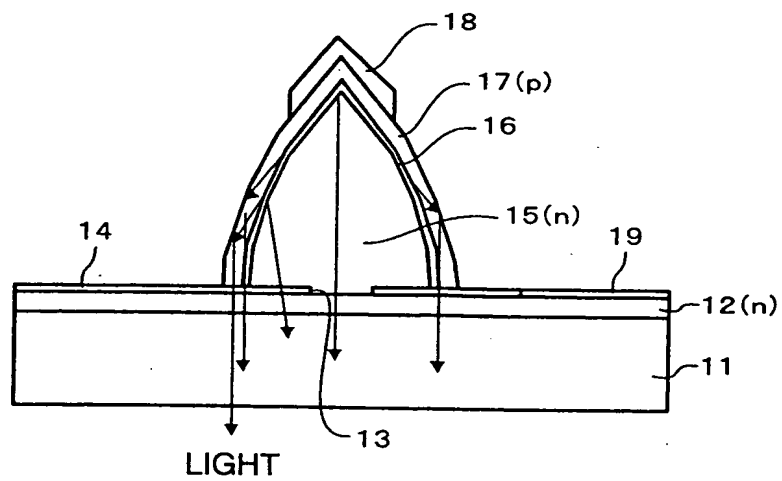
Fig. 11**Fig. 12**

Fig. 13

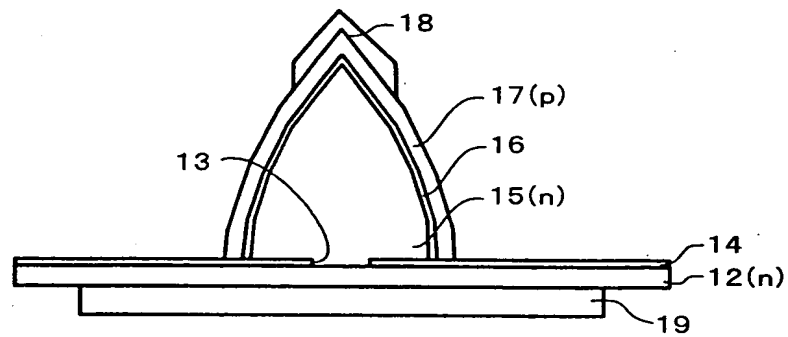


Fig. 14

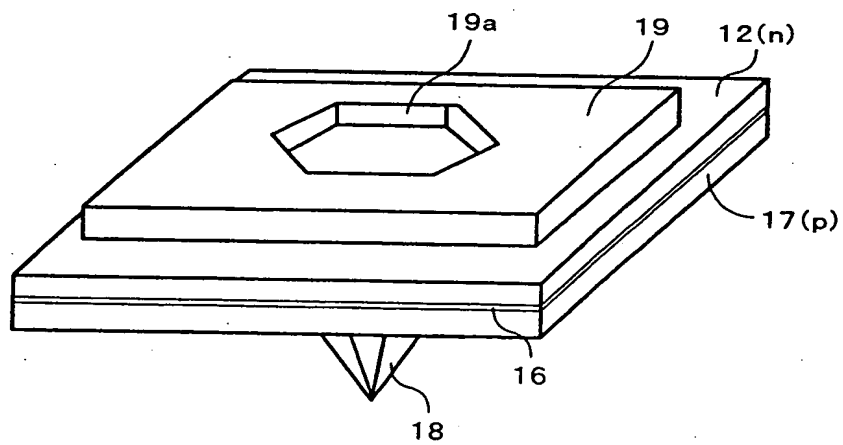


Fig. 15

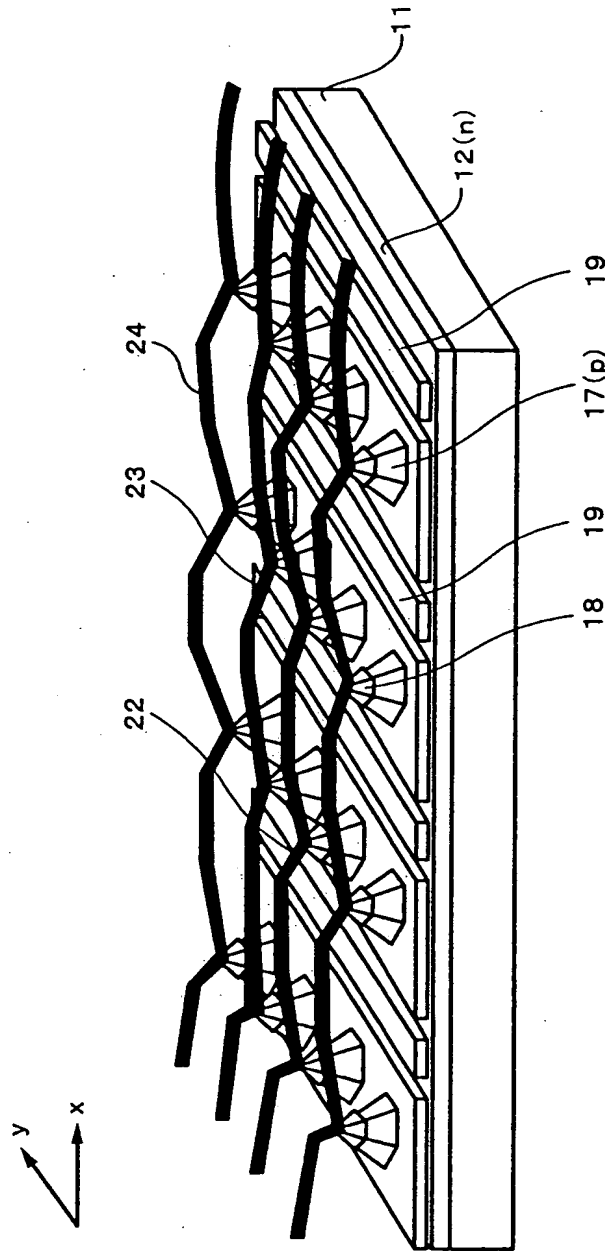


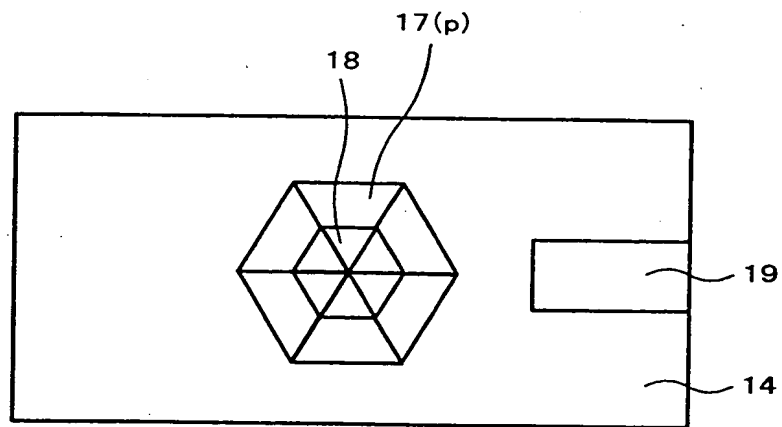
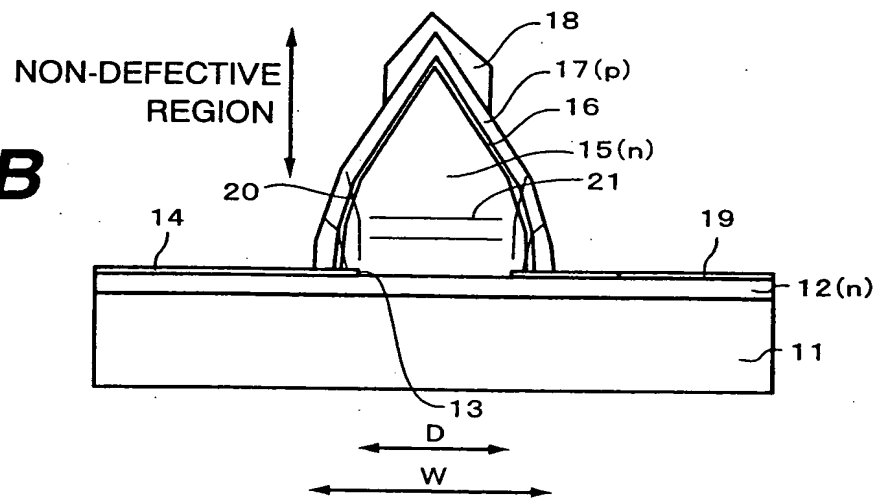
Fig. 16A**Fig. 16B**

Fig. 17A

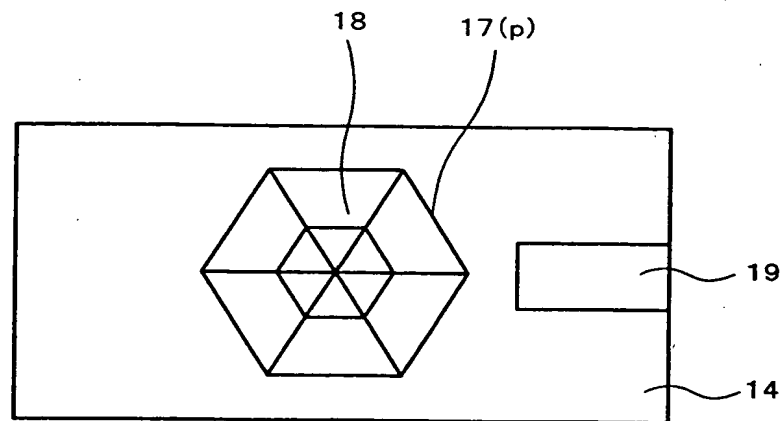


Fig. 17B

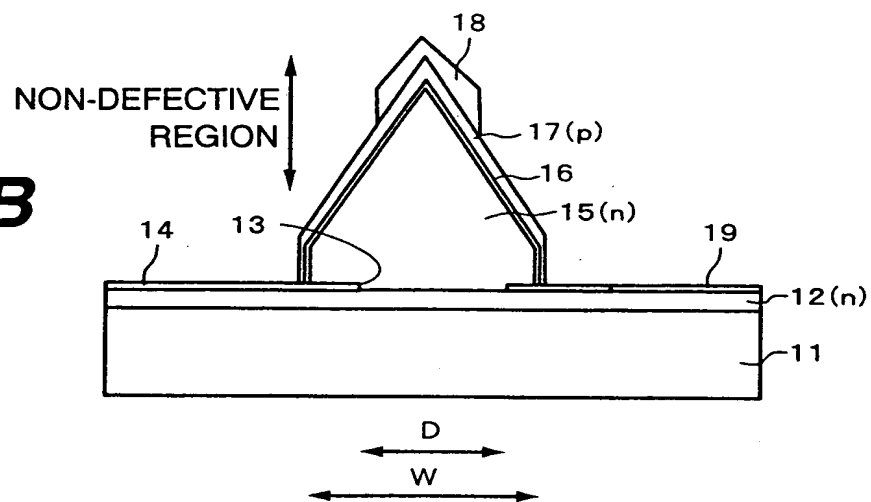


Fig. 18A

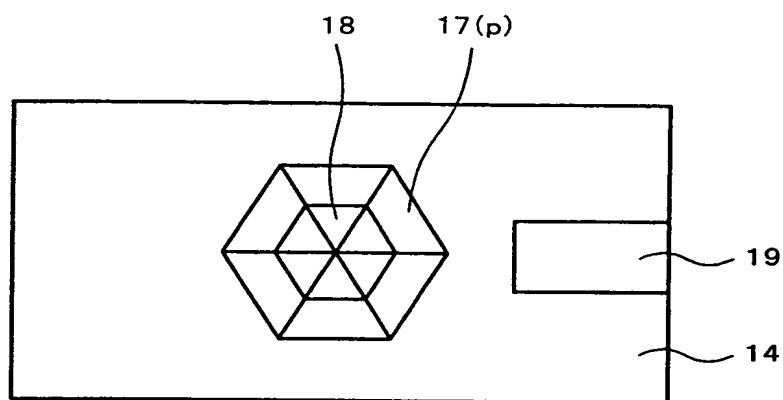


Fig. 18B

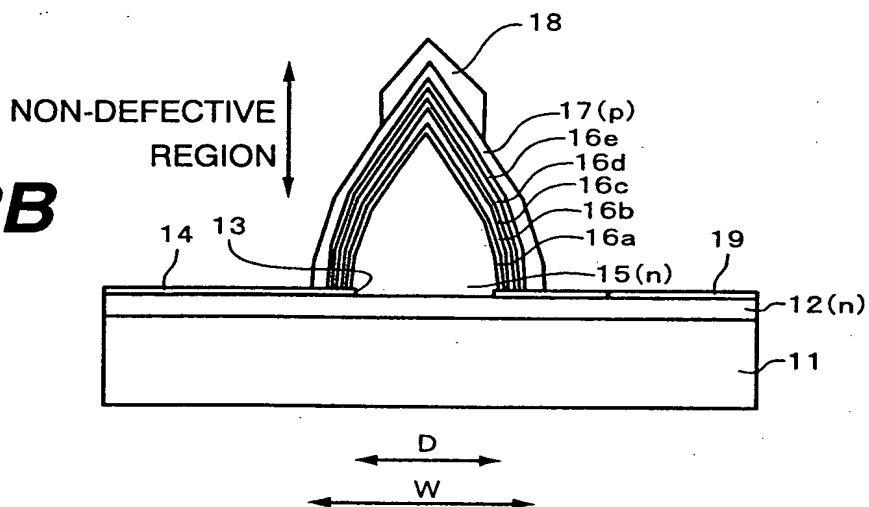


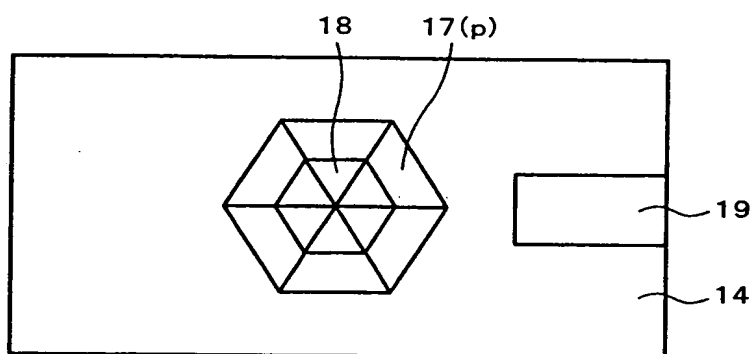
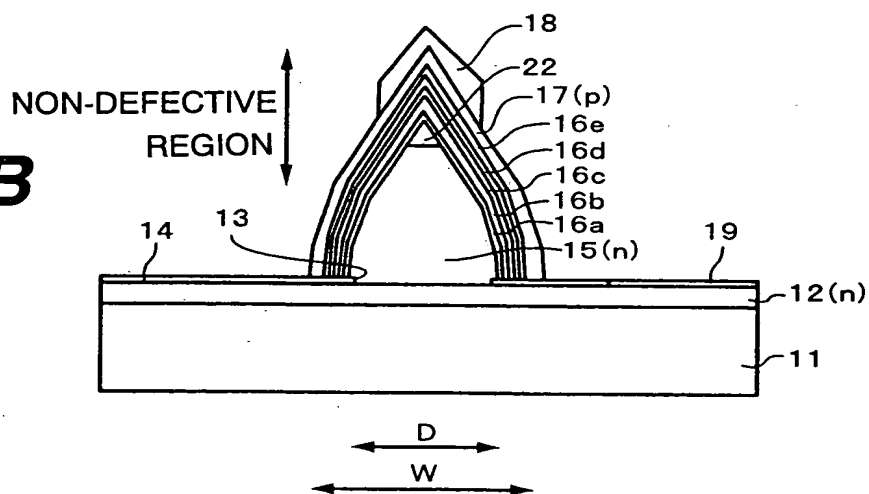
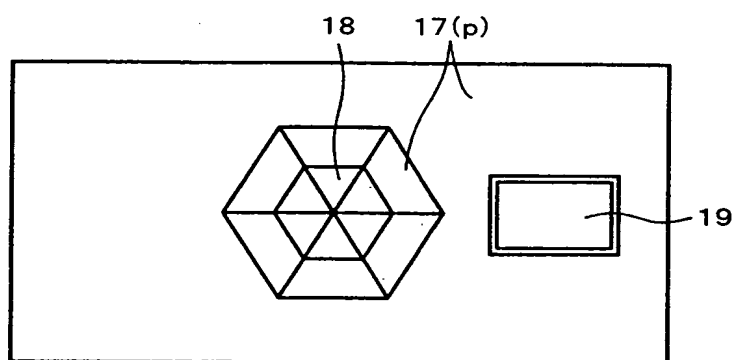
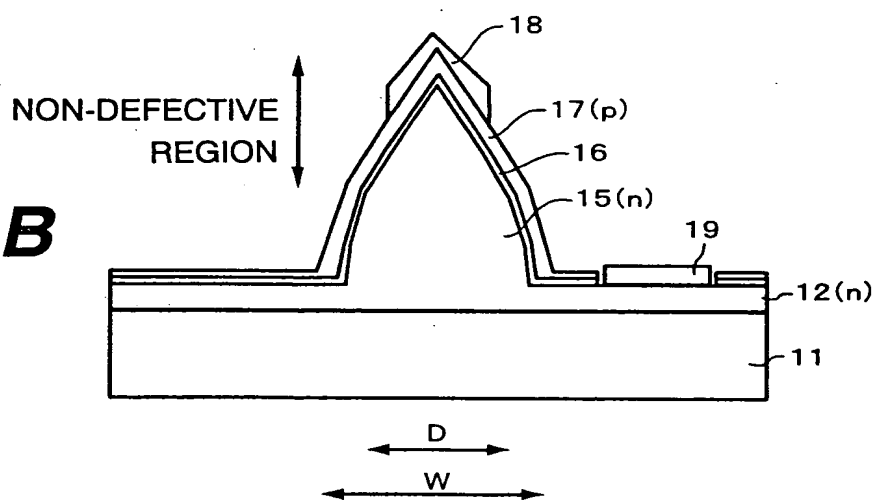
Fig. 19A**Fig. 19B**

Fig. 21A**Fig. 21B**

DESCRIPTION OF REFERENCE NUMERALS

- 11 SAPPHIRE SUBSTRATE
- 12 n-TYPE GaN LAYER
- 13 OPENING
- 14 GROWTH MASK
- 15 n-TYPE GaN LAYER
- 16 ACTIVE LAYER
- 17 p-TYPE GaN LAYER
- 18 p-SIDE ELECTRODE
- 19 n-SIDE ELECTRODE